

SHEERER

Serial No. **09/848,434**

May 1, 2003

REMARKS

Reconsideration of this application is respectfully requested.

Claims 27 to 32 are being cancelled without prejudice in view of the restriction requirement. The election is made without traverse.

Claim 22 has been amended to clarify that the hollow region of the vessel is the region within the inner circumference of the annular protrusion.

The rejection of claims 22 to 25 as being obvious over Schnyder (U.S. Patent 3,035,963) or Canadian Patent Application 2,243,733 (CAN. '733) in view of Rich (U.S. Patent 3,385,753) is traversed. Schnyder and CAN. '733 disclose strainer and screen assemblies. They do not disclose an annular protrusion on a vessel wall that is impervious to material in the vessel, as does the vessel recited in the pending claims.

Independent claim 22 has been amended to make especially clear that the annular protrusion is impervious. Accordingly, cooking liquor and fibers do not seep into the protrusion ring. The applied prior art shows rings that are porous to allow cooking liquor and/or fibers to

The claims recite several features that are not disclosed in the applied prior art references including (without limitation):

- A. An annular protrusion having an exposed surface area that is
"substantially entirely impervious." (claim 22).
- B. An annular protrusion having a maximum spacing from the vessel
wall of one to 12 (1-12) inches. (claim 22).

- C. An annular protrusion that is an isosceles triangle in cross-section, and the sides of the protrusion are impervious. (claim 23).
- D. Protrusions vertically spaced from each other by one to twelve (1-12) feet. (claim 24).
- E. Protrusions that are arcuate in cross section and impervious along the radius of curvature of their arcuate surface area. (claim 25).
- F. A protrusion vertically offset from a screen within the vessel. (claim 26).

The claimed invention is directed to a vessel, e.g., digester cooking vessel, having substantially vertical internal walls and protrusions, e.g., compressions rings, on those walls. See e.g., Spec. p. 2, lns. 6-7. The protrusions on the walls promote vertical movement of the fibrous slurry in the cooking vessel. The protrusions are separate and distinct from the screening assemblies within the vessel. Figure 1 shows that the screen assemblies 14, 15, 16 and 17, are at different horizontal levels in the vessel than are the protrusions, 21 to 27. Moreover, the protrusions are at horizontal levels in the vessel that are otherwise substantially hollow in the circular area defined by the inner circumference of the protrusion. In particular, the protrusions extend inward from the walls of the vessel no more than one to 12 inches and the remainder of the vessel at the same horizontal level is open, as is shown in Figures 2 to 7. In contrast, screen assemblies

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substantially fill an entire horizontal level of the vessel and thus extend much further beyond the 12 inch limit recited in the claims herein.

The annular strainers 5, 21 disclosed in Schnyder extracts cooking liquor from the slurry flowing through the vessel. Schnyder does not expressly state the width of the strainers in the vessel and, thus, there is no teaching of limiting the width of the strainers to 12 inches or less. The strainers disclosed in Schnyder are clearly porous and not impervious. Moreover, there is no teaching or suggestion in Schnyder of using compression rings to assist in the movement of the slurry through the vessel. Accordingly, there is no teaching or suggestion in Schnyder of the invention recited in claims 22 to 25 of this application.

CAN '733 is distinct from the claimed invention for substantially the same reasons as stated for Schnyder. CAN '733 discloses porous extraction screen assemblies at Figures 7B, 16A and 16B that allow liquor to be extracted from the slurry in the vessel. The extraction screens are not impervious, as is required by the amended claims. Further, there is no suggestion in CAN '733 that the annular screens can be something other than a screen. In particular, CAN '733 at page 9, lines 27 to 28 state that the screens may be continuous -- not that the screens may be something other than screens. It would not have been obvious to convert the screens and strainers in Schnyder and CAN '933 into the impervious protrusions claimed in the rejected claims.

Rich does not suggest that the strainers and extraction screens of Schnyder and CAN '733 be limited to a width of no more than 12 inches. Rich discloses a strainer and

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does not suggest that annular protrusions be mounted in a vessel. Rich does not suggest that its strainer is useful for a vessel having a vertical wall or that the strainer have a shape as called for in the rejected claims. Further, the statement in Rich that the bars on the walls of the vessel may have a thickness of $\frac{3}{4}$ to 2 inches does not suggest that the strainers of CAN '733 or Schnyder should be limited to such dimensions. Further, the rejection identifies no motivation or suggestion in the prior art to convert the strainers disclosed in CAN '733 and Schnyder into impervious protrusions having a width no greater than 12 inches. There is also no teaching in the applied prior art to form protrusions (impervious or not) between screen assemblies, wherein the protrusions have a width of 2 to 12 inches.

The rejection of claims 22 to 25 as being anticipated and obvious over Johanson (U.S. Patent 5,454,490) is traversed. The cascade of cone frustums disclosed for a chip bin in Johanson do not have the shape recited in the rejected claims. Further, the cascade of cones shown in Figures 8 and 9 of Johanson form the interior wall of the vessel. These conical walls in Johanson are not substantially vertical. Claim 22 make clear that the internal surface of the vessel is substantially vertical at the protrusion. Accordingly, Johanson does not disclose or suggest the invention recited in claims 22 to 25.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone the undersigned. Prompt reconsideration and allowance of this application is requested.

Respectfully submitted,

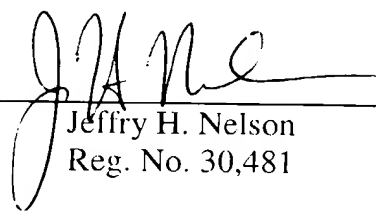
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